



# briefing notes - road safety issues

## South Waikato and Taupo

Land Transport New Zealand has prepared this road safety issues report, it is based on reported crash data and trends for the 2002–2006 period. The intent of the report is to highlight the key road safety issues and be a resource to identify possible ways to reduce the number of road deaths and injuries in the South Waikato and Taupo area.

This report is the eighth road safety report for the South Waikato and Taupo area. The data in this report applies to local roads and State Highways in the South Waikato and Taupo area.

In each new report one year's data is added to a five year block and the oldest dropped so it is unlikely that the core issues for any local body would change radically from report to report.

The issues chosen for this report are drawn from either the most common crash types, those that appear over-represented when the South Waikato and Taupo area is compared to similar local bodies or those with high social cost (high numbers of fatal and serious crashes mainly).

We have included a brief overview of crashes in the district for 2006.

We encourage local authorities to use the Ministry of Transport's Crash Analysis System (CAS) to further investigate the highlighted issues.

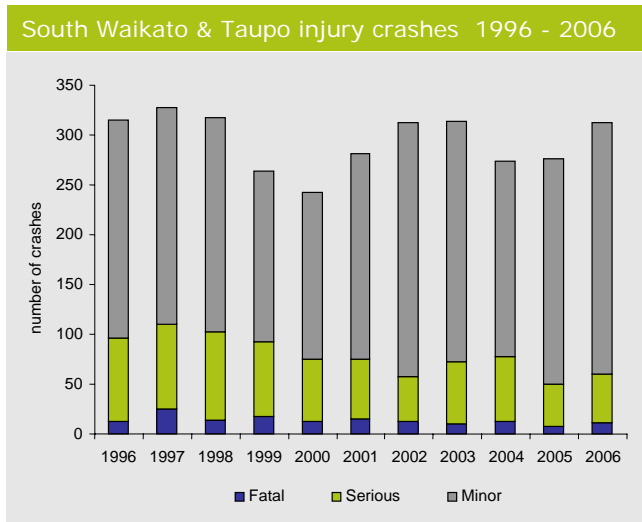
<b>Major Road Safety Issues</b>		<b>2006 road trauma</b>	
<b>South Waikato and Taupo</b>		<b>Casualties</b>	
Intersections		Deaths	11
Alcohol		Serious casualties	47
Speed		Minor casualties	252
Bends – Loss of Control			
<b>Nationally</b>		<b>Crashes</b>	
Speed		Fatal crashes	10
Alcohol		Serious injury crashes	31
Failure to give way		Minor injury crashes	163
Restraints		Non-injury crashes	443

## Overview of 2006

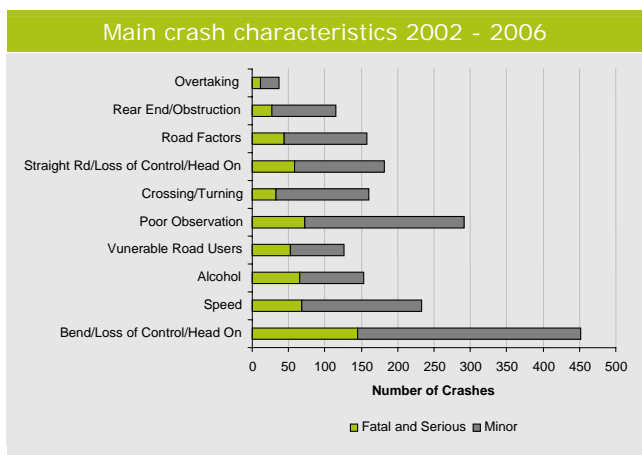
In 2006 on local roads in South Waikato and Taupo Districts there were 82 injury crashes and 213 non-injury crashes, in addition there were 122 injury crashes and 230 non-injury crashes on State Highways, as reported by the New Zealand Police.

The table below shows the number of injuries resulting from 2006 crashes by rural or urban areas for both local and Transit roads (rural is defined as an area with a speed limit of 80km/h or more).

	Fatalities	Serious injuries	Minor injuries	Total
Rural	11	41	188	240
Urban	-	6	64	70
Total	11	47	252	310



Both fatalities and serious injuries in the district have fluctuated between 1996 and 2006.



Further information about 2006 injury and non-injury crashes on local roads:

- Worst month January (37), best September (18)
- Worst day Friday (65), best Sunday (34)
- Wet road 26 percent
- Night time 38 percent
- Midblock 57 percent
- 68 percent of at fault drivers are male (injury crashes)
- 59 percent of at fault drivers in injury crashes have a full NZ licence

Further information about 2006 injury and non injury crashes on Transit roads

- Worst month March (41), best August (18)
- Worst day Friday (56), best Saturday (41)
- Wet road 30 percent
- Night time 33 percent
- Midblock 77 percent
- 66 percent of at fault drivers are male (injury crashes)
- 68 percent of at fault drivers in injury crashes have a full NZ licence

It has been observed nationally that there is a growing group of drivers who have not been exiting the graduated licence system and who are choosing to stay on restricted licences. This is making it increasingly difficult to distinguish drivers who are truly inexperienced from those that should have moved to a full licence. As a consequence it is more difficult to target educational material.

This is certainly true in South Waikato and Taupo Districts with only 64 percent of at fault drivers in injury crashes being the holder of a full driving licence.

Driver licence status (Injury crashes, at fault drivers (All South Waikato and Taupo Districts roads))	Percentage of total at fault drivers (NZ value in brackets)
Full	64.4 (58.4) %
Learner	9.0 (9.5) %
Restricted	12.8 (17.6) %
Never Licenced	3.2 (2.2) %
Disqualified	1.1 (1.7) %
Overseas	5.3 (4.2) %
Expired	0.5 (0.5) %
Other / unknown	3.7 (5.6) %

## Speed

Nationally, speed is one of the major contributing factors to road crashes. For the 12 months to the end of December 2006, excessive speed contributed to around 31 percent of fatal crashes and 16 percent of injury crashes.

During 2006, there were 1,839 injury crashes where the driver was travelling too fast for conditions.

Reducing speeds to appropriate levels is an important road safety goal. Excessive speed increases the likelihood of a crash occurring by reducing the time available for drivers to respond to hazardous situations and it also leads to more serious injuries. Research has shown that a one km/h reduction in mean speeds can produce up to a three percent reduction in injury crashes.

In the South Waikato and Taupo Districts, excessive speed was a factor in 25 percent of injury crashes in 2006.

Speed related injury crashes	2002	2003	2004	2005	2006
Urban	13	4	9	18	9
Rural	32	35	32	38	43
Total	45	39	41	56	52

There were 233 speed-related injury crashes reported in the last five years.

Males are also highly represented as at fault drivers in speed related crashes, accounting for 73 percent of drivers

Drivers at fault or part fault in speed related injury crashes (2002-2006) *	Male	Female	Total
	15- 19 years	40	15
20 - 24	23	14	<b>37</b>
25 - 29	20	10	<b>30</b>
30 - 39	27	12	<b>39</b>
40 - 49	32	6	<b>38</b>
50 - 59	17	2	<b>19</b>
60 - 69	5	2	<b>7</b>
70+	2	0	<b>2</b>
<b>Total</b>	<b>166</b>	<b>61</b>	<b>227</b>

\* (note ranges are not equal)

The following table illustrates the licence status of at fault drivers in speed related crashes in South Waikato and Taupo Districts and all New Zealand (2006).

Driver licence status, speed related injury crashes, at fault drivers in South Waikato and Taupo Districts	Percentage of total at fault drivers in speed related crashes (NZ value in brackets)
Full	54.9 (43.0) percent
Learner	11.8 (15.3) percent
Restricted	17.6 (22.5) percent
Never Licenced	5.9 (4.5) percent
Disqualified	0 (4.1) percent
Overseas	3.9 (3.7) percent
Expired	2.0 (0.5) percent
Other / unknown	3.9 (6.2) percent

Further facts about speed related crashes in South Waikato and Taupo Districts (divided into local roads and Transit roads) (2002 -2006)

### Local roads

- 7 deaths, 28 serious injuries, 99 minor injuries
- Male drivers 74 percent
- Most common crash type, Bend – (lost control/head on)
- 75 percent at midblock
- 30 percent wet road
- 52 percent night time
- Worst month March, best June
- Worst day of week Friday, best Wednesday

### Transit roads

- 20 deaths, 50 serious injuries, 167 minor injuries
- Male 73 percent
- Most common crash type, Bend – (lost control/head on)
- 86 percent at midblock
- 40 percent wet road
- 42 percent night time
- Worst month February, best October
- Worst day Saturday, best Tuesday

## Intersections

Crashes at intersections are the most common crash type in urban areas of South Waikato and Taupo Districts.

During the five year period 2002 to 2006 there were 260 injury crashes at intersections and 669 non-injury crashes. In these 9 people died, 63 received serious injuries and 311 received minor injuries.

Intersection crashes	2002	2003	2004	2005	2006
Injury crash	46	57	43	63	51
Non-injury crash	133	122	123	136	155
Total	179	179	166	199	206

The table below shows the locations of the five intersections with the highest number of crashes in South Waikato and Taupo Districts between 2002 and 2006.

Intersection name	Total crashes 2002 - 2006	Injury crashes 2002 - 2006	Total crashes in 2006
SH 1/SH 5 (Wairakei)	29	9	3
SH 1/SH 5 (Tirau)	28	12	7
SH 1/Poihipi Road	19	7	5
SH 5/Arrowsmith Avenue	18	5	4
Heuheu Street/Titirapunga Street	17	2	4

Crashes at Tee junctions in urban areas are the most common type of intersection crash reported, followed by crashes at Tee rural junctions.

Junction type	Rural	Urban
Roundabout	-	55
Tee	214	346
Cross (X)	46	203
Y	13	8
Other (includes driveways )	15	29

The main causes contributing to crashes described in Police reports were:

- Poor Observation
- Failure to stop and give way
- Speed

Intersections present most drivers with one of their biggest driving challenges and as a result less experienced drivers are well represented in these crashes as illustrated in the table below showing licence class of at fault drivers.

Driver licence status, intersection related injury crashes, at fault drivers in the South Waikato and Taupo Districts.	Percentage of total at fault drivers in intersection related crashes (NZ value in brackets)
Full	61.9 (60.9) %
Learner	8.5 (9.4) %
Restricted	11.7 (14.8) %
Never Licenced	2.8 (2.5) %
Disqualified	1.2 (1.6) %
Overseas	8.1 (3.7) %
Expired	0.4 (0.8) %
Other / unknown	5.2 (6.3) %

Further facts about intersection related crashes in South Waikato and Taupo Districts 2002 to 2006 (divided into local roads and Transit roads):

### Local roads

- 2 deaths, 16 serious injuries, 140 minor injuries
- 59 percent of at fault drivers are male
- Most common crash type, poor observation
- 9.8 percent alcohol over limit
- 92 percent urban
- 27 percent wet roads
- 27 percent night time
- Worst month December, best April
- Worst day of week Friday, best Sunday

### Transit roads

- 7 deaths, 47 serious injuries, 171 minor injuries
- 67 percent of at fault drivers are male
- Most common crash type, poor observation
- 3 percent alcohol over limit
- 32 percent urban
- 19 percent wet roads
- 20 percent night time
- Worst month March, best November
- Worst day of week Friday, best Thursday

## Fatigue

Fatigue ranks 3rd as a contributory cause of crashes in South Waikato and Taupo Districts.

However fatigue remains a difficult cause to identify and it is accepted that the reported numbers of crashes will be below actual crash numbers.

Even though it is considered socially acceptable to drive while fatigued as opposed to drink driving research indicates that the effects on cognitive skills are similar. It is extremely difficult for Police to prevent people from driving while fatigued.

For the years 2002 to 2006 fatigue was reported as a contributory factor in around six percent of all injury crashes reported by the Police in New Zealand. However for the same period fatigue has been implicated in between 11 and 14 percent of all fatal crashes.

In South Waikato and Taupo Districts between 2002 and 2006 there were 122 injury crashes where fatigue was a contributory cause. In these crashes 21 people died, 37 received serious injuries and 121 received minor injuries.

Different types of driver fatigue identified by Police in South Waikato and Taupo Districts

Type of fatigue identified by Police	Percentage of injury crashes in South Waikato and Taupo Districts	Percentage of injury crashes in New Zealand
General (unspecified)	10 percent	4.9 percent
Long trip	0.7 percent	0.3 percent
Lack of sleep	1.2 percent	0.5 percent
Worked long hours before driving	0.3 percent	0.6 percent

The following table illustrates the licence status of at fault drivers in fatigue related crashes in South Waikato and Taupo Districts and all New Zealand (2002 - 2006).

It is far more common for relatively inexperienced drivers to be involved in fatigue-related crashes than in speed or alcohol related crashes.

Overseas drivers are also more highly represented in Waikato and Taupo Districts than they are nationally.

Driver licence status, fatigue related injury crashes, at fault drivers in South Waikato and Taupo Districts	Percentage of total at fault drivers in fatigue related crashes (NZ value in brackets)
Full	57.0 (57.7) percent
Learner	10.7 (10.1) percent
Restricted	13.2 (16.2) percent
Never Licenced	2.5 (2.3) percent
Disqualified	1.7 (2.2) percent
Overseas	5.8 (4.2) percent
Expired	0 (1.3) percent
Other / unknown	9.1 (6.0) percent

Further facts about fatigue related crashes in Waikato and Taupo Districts (divided into local roads and Transit roads) (2002 - 2006)

### Local roads

- 1 death, 1 serious injury, 14 minor injuries
- Male drivers 79 percent
- Most common crash type, Bend – (lost control/head on)
- 0 percent at intersections
- 0 percent urban
- 1.3 percent wet road
- 53 percent night time
- Worst month November, best April
- Worst day of week Thursday, best Monday

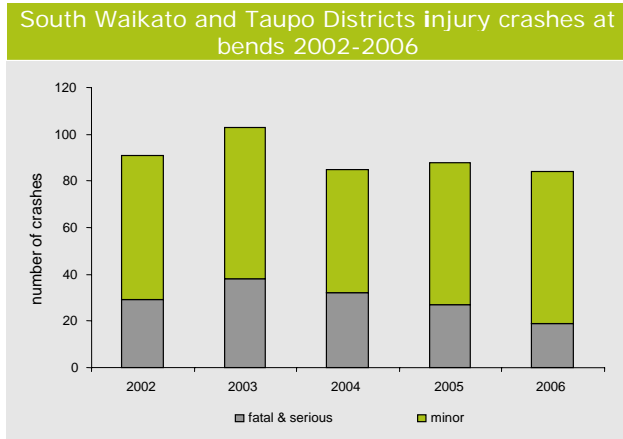
### Transit roads

- 20 deaths, 36 serious injuries, 107 minor injuries
- Male drivers 69 percent
- Most common crash type, Bend – (lost control/head on)
- 0.9 percent at intersections
- 6.5 percent urban
- 22 percent wet road
- 44 percent night time
- Worst month December, best July
- Worst days of week Monday and Friday, best Tuesday and Thursday

## Crashes at bends

Between 2002 and 2006 45 percent of all injury crashes in the South Waikato and Taupo Districts occurred at bends. These crashes resulted in 42 fatalities, 103 serious injuries and 306 minor injuries.

Crash numbers have remained fairly constant for the past 3 years.



Most crashes at bends involved a driver losing control of their vehicle and either running off the road or colliding with another vehicle.

After drivers lose control their vehicles often crash into roadside hazards such as ditches, banks, poles or trees. Hitting these objects can result in a relatively minor off-road event turning into something far more serious.

The three most common roadside hazards struck in injury crashes in South Waikato and Taupo Districts were banks (117), trees (66) and fences (65) from a total of 517 objects struck.

The following table lists the main characteristics of these crashes.

Crash characteristic	Crashes
Single vehicle	76 percent
Alcohol	23 percent
Excessive speed for the conditions	41 percent
Road factors	23 percent
Poor handling	25 percent
Rural road	86 percent
Wet road	34 percent
Night time	42 percent

The following table illustrates the licence status of at fault drivers for crashes occurring at bends in the South Waikato and Taupo Districts and all New Zealand (2006).

Driver licence status, bend related injury crashes, at fault drivers in South Waikato and Taupo Districts	Percentage of total at fault drivers in bend related crashes (NZ value in brackets)
Full	56.7 (51.1) percent
Learner	11.4 (10.7) percent
Restricted	13.9 (17.9) percent
Never Licenced	3.2 (4.1) percent
Disqualified	1.6 (2.8) percent
Overseas	5.2 (5.6) percent
Expired	0.9 (0.9) percent
Other / unknown	7.1 (6.8) percent

Further information about crashes on bends in South Waikato and Taupo Districts:

### Local roads

- 14 deaths, 51 serious injuries, 137 minor injuries
- Male drivers 73 percent
- Most common crash type, loss of control /head on
- Most common age group 15 - 19
- 39 percent alcohol over limit
- Worst month January, best April
- Worst day of week Friday, best Monday

### Transit roads

- 36 deaths, 129 serious injuries, 361 minor injuries
- Male drivers 69 percent
- Most common crash type, loss of control /head on
- Most common age group 30 - 39
- 16 percent over alcohol limit
- Worst month December, best May
- Worst day of week Saturday, best Tuesday

## Road factors

A safe road environment incorporates numerous design principles, appropriate geometric design standards, good delineation under all conditions, adequate surface skid resistance and a roadside free of unforgiving hazards. It should also serve the safety needs of all vehicles and road users.

Road factors that contribute to crashes include those that affect the way a driver reacts to the driving conditions, such as:

- a slippery road surface
- obstructions on the road, such as slips
- limited visibility
- signs, signals and/or road markings being damaged or in poor condition.

Nationally, road factors were a contributing factor in 12 percent of injury crashes in 2006, with slippery road surfaces being the key factor.

In the South Waikato and Taupo districts, road factors were a factor in 20 percent of injury crashes in 2006, an increase from 2005.

There were 158 road factor related injury crashes reported in the last five years.

Road factors were predominantly a rural issue in the South Waikato and Taupo districts in 2006 (rural is defined as an area with a speed limit of 80km/h or more).

Road factor related injury crashes	2002	2003	2004	2005	2006
Urban	3	4	4	5	4
Rural	23	25	31	22	37
Total	26	29	35	27	41

### Key locations

The following provides a list of the key locations at which road factor crashes occurred during the 2002-2006 period.

South Waikato and Taupo Districts
SH 1 – 4km north of Maroa Road
SH 1 – 1km north of Puriri Road
SH 5 – 2km west of SH 28

The following table shows the number various road factors involved in injury crashes for South Waikato and Taupo districts during the period 2002-2006.

Number of occasions Police reported this factor 2002 to 2006	Local road	Transit road
Slippery road	40	46
Road surface in poor condition	6	6
Road obstructed	-	3
Visibility limited	9	10
Signs or signals (needed or faulty)	-	2
Markings (needed or faulty)	-	1
Street lighting	1	2

Further facts about road factor related crashes in South Waikato and Taupo districts (2002 -2006) by local and Transit roads.

#### Local roads

- 3 deaths, 15 serious injuries, 29 minor injuries
- Most common crash type, Bend – (lost control/head on)
- 14 percent at intersections
- 35 percent urban
- 38 percent wet road
- 43 percent night time
- Worst month March, best January

#### Transit roads

- 14 deaths, 34 serious injuries, 163 minor injuries
- Most common crash type, Bend – (lost control/head on)
- 0.7 percent at intersections
- 0.6 percent urban
- 57 percent wet road
- 36 percent night time
- Worst month February, best September

## Partnerships

Land Transport NZ works closely with many road safety partners at national, regional and local levels. These include government departments, enforcement agencies, territorial local authorities, health authorities and local service providers.

Some of the key road safety partners in the South Waikato/Taupo area include:

### **New Zealand Police**

Bay of Plenty District Road Policing Manager  
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### **Road Safety Co-ordinators**

South Waikato District Council  
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### **Accident Compensation Corporation**

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ACC Injury Prevention Consultant  
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South Waikato Area  
ACC Injury Prevention Consultant  
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